



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,668	09/08/2003	Peter Maier-Laxhuber	119-28	2156
23869	7590	05/17/2004	EXAMINER	
HOFFMANN & BARON, LLP 6900 JERICHO TURNPIKE SYOSSET, NY 11791			ZEC, FILIP	
			ART UNIT	PAPER NUMBER
			3744	
DATE MAILED: 05/17/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/657,668

Applicant(s)

MAIER-LAXHUBER ET AL.

Examiner

Filip Zec

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12-14 is/are rejected.
- 7) ☐ Claim(s) 9-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "relatively little" in claim 2 is a relative term which renders the claim indefinite. The term "relatively little" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The applicant is required to quantify the amount of heat in question.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,881,573 to Ebbeson. Looking at FIG.'s 1 and 3, one may notice the same system claimed by the applicant, namely an adsorption cooler having an evaporator (3), a condenser (4) and an adsorber (6), which is intermittently heated (31, 32) in order to increase the efficiency of the product (abstract). By heating the working liquid and thus the sorber part 6 in the regeneration phase by means of a heating means (25) and by cooling the sorber part by means of the working

Art Unit: 3744

liquid (18) during the sorption phase the efficiency of the refrigerating device is increased substantially. The reactor (5), which serves as a "buffer", has an insulating shell (16) enclosing the sorber part 6, wherein a working chamber 17 filled with working liquid 18 is reserved between the insulating shell 16 and the sorber part 6. To the working chamber 17 a second closed system 19 is connected in the upper and lower region of the working chamber 17. The upper connection can be closed by means of a shut-off valve 24. The apparatus also contains a cold storing element (11) below the evaporator.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 7, 8, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,881,573 to Ebbeson, in view of 5,816,069 to Ebbeson. Ebbeson '573 discloses applicant's basic inventive concept, an adsorption cooler having an evaporator, a condenser and an adsorber, which is intermittently heated in order to increase the efficiency of the product, substantially as claimed with the exception of stating why the evaporator is located in the upper region of the cooler, the use of zeolite and water mixture and what the temperature figures will be during the desorption stage. Ebbeson '069 shows these features to be old in the adsorption art. Claim 32 explains how, because of the higher specific gravity, the cooling medium does not mix with the sorber. Also, the temperature gradient of more than 100 K between the heat uptake

Art Unit: 3744

surface and the heat release surface does not support the patentability of the subject matter, since there is no evidence indicating such temperature difference is critical. Finally, zeolite water mixture is used because the heat is uniformly distributed through heat conducting sheets spread in uniform intervals providing a steady state process. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teaching of Ebbeson '069 to modify the system of Ebbeson '573, by explaining the location of the evaporator in order to clarify the intent of the invention.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,881,573 to Ebbeson, in view of 4,548,046 to Brandon et al. Ebbeson discloses applicant's basic inventive concept, an adsorption cooler having an evaporator, a condenser and an adsorber, which is intermittently heated in order to increase the efficiency of the product, substantially as claimed with the exception of stating the use of a radiation screen arranged below the evaporator. Brandon shows this feature to be old in the adsorption art (49, 50 FIG. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teaching of Brandon to modify the system of Ebbeson, by using the two anti-radiation screens in order to inhibit heat exchange.

***Allowable Subject Matter***

8. Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3744

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,305,186 to Py, Xavier et al.

U.S. Patent 5,732,569 to Sanada, Masaru et al.

U.S. Patent 6,601,404 to Roderick, Kevin H.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Filip Zec whose telephone number is (703) 306-3446. The examiner can normally be reached on Monday through Friday, with the exception of every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on (703) 308-2597. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Filip Zec  
Examiner  
Art Unit 3744

*William Doerrler*  
WILLIAM DOERRLER  
PATENT EXAMINER  
GROUP 3400

FZ

Application/Control Number: 10/657,668

Page 6

Art Unit: 3744